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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KIM, JUNG W

ART UNIT PAPER NUMBER

2132

DATE MAILED: 02/18/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n No.

09/459,240

Applicant(s)

BACHA ET AL.

Examiner

Jung W Kim

Art Unit

2132

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Examiner withdraws the objections to Figure 3 as the proposed amendments to the figure overcome the objections.
2. Examiner withdraws the objections to the Specification as the amendments to the disclosure overcome the objections.

### ***Claim Objections***

3. Claim 10 is objected to because of the following informalities: in regards to claim 10, the phrase 'communicating the change in access to all affected computes' should read 'communicating the change in access to all affected computers'. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-4, and 6-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frisch Essential System Administration 2<sup>nd</sup> Edition (hereinafter

Frisch) in view of Garfinkel Practical UNIX Security (hereinafter Garfinkel). As per claim 1, Frisch teaches a UNIX file access system with the following components:

- a. a manifest for an electronic data file listing access controls for the electronic data file (see Frisch, pages 234-236, 'Access Control Lists');
- b. a first record of a first user computer's access privileges to the electronic data file (see Frisch, pages 24-36, 'Files', especially pages 27-30, 'File Protection');
- c. means to communicate changes to the manifest affecting the first user computer's access privileges to the electronic data file for updating the first record (see Frisch, pages 27-32, 'File Protection'; page 237, 1<sup>st</sup>-3<sup>rd</sup> paragraph).
- d. means to verify the first user computer's access privileges to the electronic data file before the electronic data file is released to the first user (see Frisch, page 236, 4<sup>th</sup> paragraph).

In addition, Frisch teaches the Network File System (NFS) for distributed computing, which enables users situated at one computer to access a file system stored on a separate computer (see Frisch, page 607, 'NFS and NIS'). In an example disclosed by Frisch, users and their home accounts are dispersed on several physical computers with shared files residing on a separate computer (see Frisch, page 612, 'Exporting Local Filesystems'; page 615, 3<sup>rd</sup>-6<sup>th</sup> paragraph). Inherent in this configuration is an agent program for each UNIX computer that is networked by NFS. Furthermore, since each UNIX computer has a set of UIDs and GIDs unique to the computer (see Frisch, page 144, 2<sup>nd</sup> paragraph), each user computer has an agent program with access and

maintenance rights to their respective record for user computer's access privileges.

Finally, Frisch does not expressly disclose means of establishing a secure extension for each computer of a plurality of computers. However, NFS affords such a secure extension for NFS mounted filesystems. Garfinkel teaches this other property of NFS distributing computing: to maintain the security of the respective computers in a distributed NFS network, the root user (super user with UID of "0") of one computer is assigned a "nobody" account (user id of "-2") on a NFS mounted filesystem of another computer, which is given minimal to no control over the NFS mounted computer. This effectively limits the administrators control to only their particular Unix operating system (see Garfinkel, page 266, 'AUTH\_UNIX Authentication', 2<sup>nd</sup> paragraph). It would be obvious to one of ordinary skill in the art at the time the invention was made for the agents of each computer to be secure extensions of their respective computer.

Motivation for such an implementation enables shared filesystems across multiple computers, while ensuring secure extensions of the respective computers in the distributed network as taught by Frisch. Hence, the following are also covered:

- e. a first agent program for a depositor computer of an electronic data file in the data repository system which first agent program is a secure extension of the depositor computer and
- f. a second agent program for a first user computer with access privileges to the electronic data file which second agent program is a secure extension of the first user computer.

The aforementioned covers claim 1.

6. As per claim 13, Frisch covers a UNIX file access system as outlined above in the claim 1 rejection under 35 U.S.C. 103(a). In addition, Frisch teaches a technique wherein documents are encrypted so that administrators of the file system do not have access to the documents in the clear (see Frisch, page 209, 'Encrypting data'; page 240-241, 'Encryption'). It would be obvious to one of ordinary skill in the art at the time the invention was made to encrypt the original files. Motivation for such an implementation would ensure that the administrator of the filesystem does not have access to the files stored by a user as taught by Frisch.

7. As per claim 3, Frisch covers a UNIX file access system as outlined above in the claim 13 rejection under 35 U.S.C. 103(a). In addition, changes to the manifest affecting the first user computer's access privileges to the electronic data file are communicated from the second agent program to the first user computer (see Frisch, pages 27-32, 'File Protection'; page 237, 1<sup>st</sup>-3<sup>rd</sup> paragraphs).

8. As per claim 4, Frisch covers a UNIX file access system as outlined above in the claim 3 rejection under 35 U.S.C. 103(a). The reasons disclosed in the claim 3 rejection covers a plurality of users having corresponding agent programs, whereupon each of these other agent programs for their respective user computer is responsive in the same manner as the second agent is with the first user and with the first agent program. Hence, claim 4 is covered by the teachings of Frisch.

9. As per claim 6, Frisch covers a UNIX file access system as outlined above in the claim 4 rejection under 35 U.S.C. 103(a). In addition, changes to the manifest affecting the second user computer's access privileges to the electronic data file are communicated from the third agent program to the second user computer (see Frisch, pages 27-32, 'File Protection'; page 237, 1<sup>st</sup>-3<sup>rd</sup> paragraphs).

10. As per claim 7, Frisch covers a UNIX file access system as outlined above in the claim 4 rejection under 35 U.S.C. 103(a). Inherent in the NFS distributed network taught by Frisch is a file server.

11. As per claim 8, Frisch covers a UNIX file access system as outlined above in the claim 4 rejection under 35 U.S.C. 103(a). Inherent in the NFS distributed network with multiple physical computers is a switching hub to receive all communications to and from the data repository system and the agent programs. The switching hub is operatively an interface between the two computers.

12. As per claim 9, Frisch covers a UNIX file access system as outlined above in the claim 8 rejection under 35 U.S.C. 103(a). In addition, Frisch teaches ways to control environmental factors to maintain physical system security (see page 207, 3<sup>rd</sup> bullet). Hence, the interface is a secure extension of the data repository system.

13. As per claim 10, it is a method claim corresponding to claims 4 and 6-9 and it does not teach or define above the information claimed in claims 4 and 6-9. Therefore, claim 10 is rejected as being unpatentable over Frisch in view of Garfinkel for the same reasons set forth in the rejections of claims 4 and 6-9.

14. As per claim 11, Frisch covers a UNIX file access system as outlined above in the claim 4 rejection under 35 U.S.C. 103(a). In addition, claim 11 is covered by the invention disclosed by Frisch wherein the operation of the manifest and the first record are switched.

15. As per claim 12, Frisch covers a UNIX file access system as outline above in the claim 11 rejection under 35 U.S.C. 103(a). In addition, the UNIX file access system is implemented as a software suite.

16. As per claims 14-15, they are apparatus claims corresponding to claims 12 and 13 and they do not teach or define above the information claimed in claims 12 and 13. Therefore, claims 14-15 are rejected as being unpatentable over Frisch in view of Garfinkel for the same reasons set forth in the rejections of claims 12 and 13.



***Allowable Subject Matter***

17. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

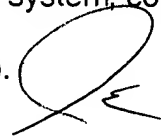
18. Applicant's arguments with respect to claims 1, 3-4, and 6-12 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung W Kim whose telephone number is (703) 305-8289. The examiner can normally be reached on M-F 9:00 A.M. to 5:00 P.M..

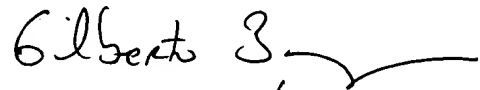
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (703) 305-1830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jung W Kim  
Examiner  
Art Unit 2132

Jk  
February 10, 2004



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